

REMARKS

Claims 1-29 were pending in the application. By this amendment, new claims 30 and 31 are added. The status of the claims is as follows:

Claims 2, 3, and 7 were cancelled in an amendment dated June 21, 2002, and thus are not pending.

Claim 25 is cancelled by this amendment, and thus is not pending.

Claims 6 and 8-18 were withdrawn from consideration in an amendment and Response to Restriction Requirement dated March 10, 2004.

Claims 1, 4, 5, 19-14, and 26-29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,414,669 B1 to Masazumi ("Masazumi") in view of U.S. Patent No. 5,990,859 to Inoue et al. ("Inoue").

To date, no Notice of Draftsperson's Patent Drawing Review has been received. Applicants respectfully request receipt of this document when it becomes available. Please note that the original drawings filed in the patent application are "formal" drawings.

Claim 1 has been amended to more distinctly claim the reset process. This change does not introduce any new matter as support is found on page 44, lines 9-23 and in FIG. 43.

Claim 24 has been amended to correct a spelling error. This change is not necessitated by the prior art, is unrelated to the patentability of the invention over the prior art, and does not introduce any new matter.

35 U.S.C. § 103(a) Rejection

The rejection of claims 1, 4, 5, 19-24, and 26-29 under 35 U.S.C. § 103(a), as being unpatentable over Masazumi in view of Inoue, is respectfully traversed based on the following.

Amended claim 1 includes the limitation:

wherein said driver performs repetitious writing on said part of the pixels of the liquid crystal display corresponding to the selected scan electrodes by applying voltage pulses including a reset pulse to reset the liquid crystal to a homeotropic state and a selection pulse to select a desire display state of the liquid crystal, the voltage pulses including the reset pulse and the selection pulse being applied to each of the selected scan electrodes sequentially for repetitious writing.

As shown in FIG. 43, this claim limitation corresponds to resetting and selecting each line as the lines are scanned sequentially.

In contrast, neither Masazumi nor Inoue disclose such a sequential reset. As seen in each of FIGs. 5, 25, 27, 31, and 33-35 of Masazumi, the reset pulse for each line is simultaneous, not sequential as found in the limitation of claim 1. Column 11, lines 1-3 of Masazumi confirms this simultaneous reset by stating “the pulse voltage of voltage VF and pulse width t1 is applied to the liquid crystal in every pixel during the reset period 301.” Similarly, Inoue does not disclose a sequential reset, but rather a simultaneous erase, as seen by the V_{I1} through V_{I3} traces in which each line is seen to be erased (reset) simultaneously. Thus, because the combination of Masazumi and Inoue fail to disclose or suggest each limitation of claim 1, the combination of Masazumi and Inoue cannot render obvious the invention of claim 1.

Claims 4, 5, 19-24, and 26-29 depend from claim 1. As claim 1 is nonobvious over the combination of Masazumi and Inoue, claims 4, 5, 19-24, and 26-29 are nonobvious for at least the same reasons.

Claims 4, 5, 19-24, and 26-29 include additional limitations not disclosed or suggested by the combination of Masazumi and Inoue. As a first example, claim 4 includes the limitation that the controller controls the driver based on motion picture data. The Office Action notes that Masazumi does not disclose such a controller. Further, the cited portion of Inoue at column 5, lines 13-30 regard signal generation and how signals are supplied to the controller, not that the data corresponds to motion picture data. Inoue column 7, lines 5-22 and 40-55 disclose the use of video information. Video information need not be motion picture data as even a still image is video information as opposed to audio information. Inoue column 8, lines 19-29 and 51-67 similarly disclose the use of video information that need not correspond to motion picture data.

Claim 23 includes a limitation that the repetitious writing part is small enough that the display thereon can be seen as a motion picture. FIGs. 15 and 16 of Inoue are cited for showing a display that can be seen as a motion picture. FIG. 15 shows a frame time of 100m sec. A frame time of 100m sec corresponds to a frame rate of 10 frames/second. A frame rate of 10 frames/second is much too slow to be considered a motion picture. Standard motion picture rates are at least 24 frames/second, while 30 frames/second is more typical.

Claim 29 includes a limitation that the position and size of the repetitious writing part be variable with respect to size and position. The Office Action cites to Inoue, column 7, lines 35-55 as support for variable size and position. At best, Inoue may disclose that the start line of the written/rewritten portion is “selected,” *see* lines 41 and 43. However, there is no indication that the size of the portion is variable.

Accordingly, it is respectfully requested that the rejection of claims 1, 4, 5, 19-24 and 26-29 under 35 U.S.C. § 103(a) as being unpatentable over Masazumi in view of Inoue, be reconsidered and withdrawn.

New Claims

By this amendment, new claims 30 and 31 are added. Claim 30 corresponds to original claim 1, but further includes the limitation that the portion of the display not selected for repetitious writing uses a memory effect to display intermediate tones. Support for the display of intermediate tones can be found in the present application on page 18, lines 17-19 in which the more specific “intermediate color” is disclosed. “Intermediate tones” would be more general, allowing application to color or black and white displays. Thus, claim 30 does not introduce any new matter. Claim 31 corresponds to amended claim 1, but further includes displaying intermediate tones in the portion of the display not selected for repetitious writing. Thus, claim 31 does not introduce any new matter.

With respect to claim 30, the Office Action admits Masazumi does not disclose a controller writes to only selected scan electrodes. While Inoue may disclose writing to only selected scan electrodes, Inoue is based upon ferroelectric liquid crystals. Such liquid crystals have two stable states, *i.e.*, are bistable. The two stable states correspond to an on state and an off state in the display, but no intermediate states. With no intermediate states, ferroelectric liquid crystals do not permit the display of intermediate tones. Therefore, the combination of Masazumi and Inoue fails to disclose or suggest each limitation of claim 30 and cannot render claim 30 obvious.

As amended claim 1 is nonobvious over the combination of Masazumi and Inoue, claim 31 is nonobvious for at least the same reasons as claim 1 as claim 31 includes each of the limitations found in claim 1.

CONCLUSION

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

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Amendment dated September 21, 2004
Reply to Office Action of June 4, 2004

This Amendment increases the number of independent claims by 2 from 11 to 13 and increases the total number of claims by 1 from 26 to 27, but does not present any multiple dependency claims. Accordingly, a Response Transmittal and Fee Authorization form authorizing the amount of \$190.00 to be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260 is enclosed herewith in duplicate. However, if the Response Transmittal and Fee Authorization form is missing, insufficient, or otherwise inadequate, or if a fee, other than the issue fee, is required during the pendency of this application, please charge such fee to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260.

Any fee required by this document other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

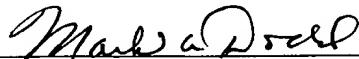
If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee,

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Respectfully submitted,

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